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Tardieu Scale

Availability:	**This instrument is not currently available on the NINDS CDE website. Please visit this link for more information on this instrument Tardieu Scale.**
Classification:	**Core:** Amyotrophic lateral sclerosis (ALS) **Supplemental – Highly Recommended:** Cerebral Palsy (CP) **Supplemental**: General **Exploratory**: Friedreich's Ataxia (FA), Spinal Cord Injury (SCI) and SCI-Pediatric
Short Description of Instrument:	**Construct measured:** Spasticity **Generic vs. disease specific**: Generic **# of items:** Depends on number of joints being tested
Comments/Special Instructions:	**Background:** The Tardieu Scale provides a clinical measure of spasticity and involves assessment of resistance to passive movement both at slow and fast speeds. It is performed with the participant in the supine position, with their head in midline. Measurements then occur at three different velocities—V1 (as slow as possible: slower than the natural drop of the limb segment under gravity), V2 (speed of limb segment falling under gravity), V3 (as fast as possible: faster than the rate of the natural drop of the limb segment under gravity). By moving the participant's limbs at different velocities, the response to stretch can be more easily gauged since the stretch reflex responds differently to velocity.
Rationale/ Justification:	**Strengths/Weaknesses:** The Tardieu Scale involves a more elaborate examination of hyperreflexia than any of the other test, employing three different speeds of movement, and also measures range of motion. Hence it requires more training, more time to administer, and the use of a goniometer. The analysis of the outcome is potentially quite complex, given the multi-dimensional nature of the measurement. It has been explored more widely in other conditions, such as stroke, traumatic brain injury and cerebral palsy. There is relatively little experience in SCI studies. As a more complete measure of the phenomenon of spasticity it may be scientifically useful, though perhaps more detailed than is really necessary or appropriate in a clinical trial for an anti-spasticity medication. Like the simpler Modified Ashworth Scale, it suffers from the limitation of a measurement applied in an "artificial" clinical setting to a condition that can show large temporal and situational variability in the real world, where its medical significance lies. SCI-Pediatric: No current studies done with children; research is needed.

References:	**Key Reference:** Tardieu G, Shentoub S, Delarue R. Research on a technic for measurement of spasticity. Rev Neurol (Paris). 1954;91(2):143–144. **Additional References:** Ansari NN, Naghdi S, Hasson S, Azarsa MH, Azarnia S. The Modified Tardieu Scale for the measurement of elbow flexor spasticity in adult patients with hemiplegia. Brain Inj. 2008;22(13-14):1007–1012. Boyd R & Graham HK. Objective measurement of clinical findings in the use of botulinum toxin type A for the management of children with CP. Eur J Neurol. 1999;6(Suppl 4):S23–S35. Gracies JM, Burke K, Clegg NJ, Browne R, Rushing C, Fehlings D, Matthews D, Tilton A, Delgado MR. Reliability of the Tardieu Scale for assessing spasticity in children with cerebral palsy. Arch Phys Med Rehab. 2010;91(3):421–428. Haugh AB, Pandyan AD, Johnson GR. A systematic review of the Tardieu Scale for the measurement of spasticity. Disabil Rehabil. 2006;28(15):899–907. Morris S. (2002). Ashworth And Tardieu Scales: Their clinical relevance for measuring spasticity in adult and paediatric neurological populations. Phys Ther Rev. 2002;7(1):53–62.